UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,261	12/31/2003	Steve S.K. Chou	TRMB1405	1726

7590 02/16/2007 WAGNER, MURABITO & HAO LLP Third Floor Two North Market Street San Jose, CA 95113	**EXAMINER** ORR, HENRY W

ART UNIT	PAPER NUMBER
2176	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

		Application No.	Applicant(s)
Office Action Summary		10/750,261	CHOU, STEVE S.K.
		Examiner	Art Unit	
		Henry Orr	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _31 December 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _31 December 2003_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _2/3/2006_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to application communication filed on 12/31/2003.

2.   Claims 1-20 are pending in the case. Claims 1, 8 and 15 are independent claims.

Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted on 2/3/2006 is in

compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is

considering the information disclosure statement.

Drawings

4.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference character(s) not mentioned in the

description:

>   a) Ref. #220 in Figure 2A

>   b) Ref. #401 in Figure 4B

>   c) Ref. #440 in Figure 4B

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the

specification to add the reference character(s) in the description in compliance with 37

CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being

amended. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37

CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Specification

5.   The disclosure is objected to because of the following informalities:

a) On p. 9 line 23, **"fields 210, 215, and 225"** should be **"fields 215, 220, and

225"** according to Fig.2A.

b) On p. 10 line 2, **"225"** should be **"220"** according to Fig. 2A because ref. #

225 does not have a dropdown menu arrow on the right of the field.

c) On p. 13 line 8, the "t" in "the" should be a capital letter to properly indicate the

beginning of a sentence.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   **Claims 1-5, 7, 8, 11-15 and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas et al. (hereafter referred to as Thomas), U.S. Patent # 7,103,774 B2.**

Regarding claim 1, Thomas teaches **"portable handheld device that provide graphical interfaces" (col. 27 lines 35-45).** (claim 1; i.e., A system for entry and display of blueprint data comprising a handheld device).

Thomas also teaches **"the user may toggle between a data entry screen 334 and a level draw screen 436" (col. 21 lines 30-34).** (claim 1; i.e., graphical user interface for providing line segment data entry fields and for displaying input line segments). Examiner interprets the graphical user interface to be capable of providing line segment data entry fields for the line objects (col. 24 lines 10-18).

Thomas further teaches **"data recording device 330 includes a processor, memory" (col. 15 lines 22-25).** (claim 1; i.e., a processor and memory adapted for accepting, storing, and editing line segment data associated with said input line segments.)

Regarding claim 2, Thomas teaches **"Fig. 9 illustrates the hierarchical nature in which job-site elements that are mapped by the operator are subsequently stored in a working database" (col. 16 lines 2-5).** (claim 2; i.e., wherein said input line segments are stored as a hierarchical sequence) Examiner interprets the job-site elements to include the line object element, which is equivalent to the line segment. The hierarchical nature of the elements, which are stored in a working database is interpreted as being "stored as a hierarchical sequence" as recited in claim 2.

Thomas further teaches "**Referring to the area illustrated in FIG. 5, this first segment pair may include for example wall 1 (step 186) and wall 2 (step 194). In order to calculate the error on this segment pair, the system effectively isolates the pair (step 918), and determines the error on the segment**" (col. 26 lines 55-65) (claim 2; i.e., wherein editing, insertion, or deletion of a selected line segment translates line segments that succeed the selected line segment of said hierarchical sequence without translating line segments that precede the selected line segment in said hierarchical sequence.) Examiner interprets wall 1 and wall 2 as line segments that are edited or translated in isolation without translating line segments that precede the selected wall 1 and wall 2 line segments.

Regarding claim 3, Thomas teaches "**The position of each structural element is defined in absolute terms, having a set of positional coordinates, lengths, directions etc...**" (col. 26 lines 50-52). (claim 3; i.e., wherein said line segment data entry fields comprise a start point field, a direction field, and a length field.) Examiner interprets the data entry screen to have corresponding fields for the positional coordinates, lengths and directions because the line object is to create a structural element that can be defined in absolute terms. Therefore, the examiner interprets the fields to be in absolute terms for each structural element such as a line object that is used to represent a window. Examiner also interprets the positional coordinates that are defined to be capable of representing the starting point of a structural element. Thus, the point coordinate field is interpreted to be a start point field as well. See table 1 as an

example of the type data that can be entered into the fields of the data entry screen by the operator (col. 12-13).

Regarding claim 4, Thomas teaches **"Operator-wearable devices can also be used, including those with touch-screen display"(col. 7 lines 41-42).** (claim 4; i.e., said display is a touch-screen)

Regarding claim 5, Thomas teaches **"interpret the original recorded data and convert it into a set of drawing components, i.e., points, lines, and arcs with their relative Cartesian coordinates" (col. 8 lines 18-21).** (claim 5; i.e., wherein said a graphical user interface further provides arc data fields.) Examiner interprets the Thomas invention to have data fields for creating all drawing components including components such as arcs.

Regarding claim 7, Thomas teaches **"A keyboard 336 may be used for data entry" (col. 15 lines 27-28).** (claim 7; i.e., further comprising a keypad). Examiner interprets the keyboard to be equivalent to a keypad because a keypad is often a small handheld keyboard.

Claim 8 is a method claim and is substantially encompassed in system claim 3; therefore the method claim is rejected under the same rationale as system claim 3 above.

Regarding claim 11, Thomas teaches **"The linkage may even be a purely vector linkage, simply linking the spatial position of one element to that of another element" (col. 4 lines 21-28).** (claim 11; i.e., entering a start point for a second line segment, wherein said start point of said second line segment is an end

point of said first line segment; and entering and displaying said second line segment on said display.) Examiner interprets vector linkage to involve entering start points for line objects as illustrated in Thomas's Table 1. Figure 3 displays several line objects ("line segment") linked together at a line segment end point as recited in claim 11(see Figure 3).

Regarding claim 12, **Thomas's Table 1 illustrates the ability for the user to enter the start point for a line segment at any end point of a previously created line segment.** (claim 12; i.e., entering a start point for a third line segment, wherein said start point of said third line segment is an end point of said first line segment;)

Thomas further teaches **"A primary goal is to close the segment pair (step 926, i.e. to ensure that the individual elements in the segment pair correctly abut one another" (col. 26 lines 64-67).** (claim 12; i.e., translating said second line segment so that the start point of said second line segment coincides with an end point of said third line segment.) Examiner interprets the individual element as a line object that can be translated to abut ("coincides") the other line object within the pair. Examiner also interprets the line segments can be designated as first, second, or third because the line segment hierarchical rank is based on the sequence of order in which the line segments were inserted to create the entire drawing.

Regarding claim 13, **Thomas's Table 1 illustrates the ability for the user to enter the start point for a line segment at any end point of a previously created line segment.** (claim 13; i.e., entering a start point for a third line segment, wherein said start point of said third line segment is an end point of said second line segment;)

Thomas's Figure 11 illustrates a graphical interface for entering and displaying line objects ("line segments") regardless of the hierarchal ranking of first, second or third line object. (claim 13; i.e., entering and displaying said third line segment on said display.)

Regarding claim 14, Thomas teaches "Fig. 9 illustrates the hierarchical nature in which job-site elements that are mapped by the operator are subsequently stored in a working database" (col. 16 lines 2-5). (claim 14; i.e., storing said first, second, and third line segments as a hierarchical sequence) Examiner interprets the job-site elements to include the line object element, which is equivalent to the line segment. The hierarchical nature of the elements, which are stored in a working database is interpreted as being "storing as a hierarchical sequence" as recited in claim 14.

Thomas further teaches "Referring to the area illustrated in FIG. 5, this first segment pair may include for example wall 1 (step 186) and wall 2 (step 194). In order to calculate the error on this segment pair, the system effectively isolates the pair (step 918), and determines the error on the segment" (col. 26 lines 55-65). (claim 14; i.e., wherein editing or deletion of said second line segment automatically translates said third line segment without translating said first line segment.) Examiner interprets wall 1 and wall 2 to be second and third line segment, respectively. The pair of line segment was isolated from the first or previous hierarchically rank line segments. Therefore, wall 1 ("second line segment") and the wall 2 ("third line segment") are translated to minimize the error of the segment pair. When the error is minimized using

just wall 1 and wall 2, no further translation is needed because the error has been translated to an acceptable minimize level. Thus, the first line object ("first line segment") that connects to the wall 1 ("second line segment") is not translated.

Claim 15 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in system claim 3; therefore the claim is rejected under the same rationale as system claim 3 above.

Claim 17 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in method claim 11; therefore the claim is rejected under the same rationale as method claim 11 above.

Claim 18 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in method claim 12; therefore the claim is rejected under the same rationale as method claim 12 above.

Claim 19 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in method claim 13; therefore the claim is rejected under the same rationale as method claim 13 above.

Claim 20 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in method claim 14; therefore the claim is rejected under the same rationale as method claim 14 above.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 6, 10, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over by Thomas as cited and applied to claim 1 above, in view of Olmsted, U.S.

Patent # 7,013,234 B1.

Regarding claim 6, Thomas does not expressly teach arc fields such as start point, end point or radius for creating an arc. However, Olmsted Figure 21 illustrates a user interface wherein the user can create an arc with a start point, end point, and radius field. (claim 6; i.e., wherein said arc data fields comprise a start point field, an end point field, and a radius field.) Examiner interprets the "arcPoints" field to allow the user to input the desired number of arc points. Depending on the number of arc points, the first point is interpreted to be the "start point" and the last point is interpreted to be the "end point".

Therefore, in the same field of endeavor of entering data measurements in a handheld device, it would have been obvious to one of ordinary skill in the art at the time the invention to modify Thomas object specific system interface to include arc fields to enter arc points which includes the start and end points and a radius field as taught by Olmsted to provide the benefit allowing the user to view and modify the attributes associated with a particular arc object type. (Thomas; col. 28 lines 45-59)

Claim 10 is a method claim and is substantially encompassed in system claim 6; therefore the method claim is rejected under the same rationale as system claim 6 above.

Claim 16 includes a program embodied on a computer readable medium to implement the steps that are substantially encompassed in system claim 6; therefore the claim is rejected under the same rationale as system claim 6 above.

10.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over by

Thomas as cited and applied to claim 1 above, in view of Minakata, U.S. Patent #

5,568,565 B1.

Regarding claim 9, Thomas does not expressly teach a repeat factor. However,

Minakata teaches **"Repetition factor Rf is a parameter which shows whether the**

user intends to repeatedly write line segments" (col. 5 lines 26-27). (claim 9; i.e.,

further comprising entering a repeat factor for said line segment.) Examiner interprets

the repetition factor as equivalent to the repeat factor because the both the repetition

factor and repeat factor indicate how many times the line segments should be repeated.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention to modify Thomas object specific system interface to include a

repetition factor as taught by Minakata to provide benefit of allowing the user to indicate

how many times to repeatedly write segments for a defined line object (Thomas; col. 28

lines 45-59) (Minakata; col. 26-31).

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Henry Orr whose telephone number is (571) 274 1308.

The examiner can normally be reached on Monday thru Friday 8 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Heather Herndon can be reached on (571) 272-4136. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/12/2007
HO

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